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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,284	10/15/2001	Eliel Louzoun	P-3945-US	1099

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EXAMINER

MASON, DONNA K

ART UNIT PAPER NUMBER

2111

DATE MAILED: 11/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,284

Applicant(s)

LOUZOUN ET AL.

Examiner

Donna K. Mason

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6, 26, 27, 36-38, 40, 41 and 54-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6, 26, 27, 36-38, 40, 41 and 54-63 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) * | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form.

More specifically, claim 3 recites a chip, further including "at least one data flow control unit to regulate flow of said data to and from said at least one FIFO unit", while claim 2 recites a chip including at least one first direct memory access (DMA) channel to transfer data from one of the memories to said at least one FIFO unit and at least one second DMA channel to transfer the data from the at least one FIFO unit to another of the memories. It appears that the "data flow control unit" recited in dependent claim 3 is performs the same function as the DMA previously recited in independent claim 2 (see paragraph [0010], lines 2-3, which recites "A DMA is used as an exemplary data flow control unit." Therefore, claim 3 is improper because it can be infringed by anything that could also infringe claim 1.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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3. Claims 54, 55, and 63 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

More specifically, claims 54, 55, and 63 recite a chip, method and device, respectively, where the first DMA channel and the second DMA channel are to operate substantially simultaneously. This subject matter, where the first and second DMA channels operate substantially simultaneously, was not disclosed in the application as filed.

Therefore, claims 54, 55, and 63 have not been considered in view of the prior art.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 2-5, 26, 27, 36-38, 40, 41, 56-59, 61, and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,428,044 to Liron.

With regard to claims 2, 36-38, and 56, Liron discloses a method for transferring data between processing units and a chip (Fig. 2, item 100), the chip including: at least

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two processing units (Fig. 2, items 200 and 204) with separate memories (Fig. 2, items 203 and 207) and separate busses (Fig. 2, items 214 and 215), where the at least two processing units exchange data therebetween by transferring the data between the memories; at least one first in first out (FIFO) unit (Fig. 2, items 201 and 205) to transfer the data between the busses; at least one first direct memory access (DMA) channel (Fig. 2, items 212) to transfer the data from one of the memories to the at least one FIFO unit; and at least one second DMA channel (Fig. 2, item 213) to transfer the data from the at least one FIFO unit to another of the memories. With further regard to claim 56, Liron discloses a device (Fig. 2, item 102) including a chip (Fig. 2, item 100). (See *generally*, column 5, lines 37-67 to column 6, lines 1-67).

With regard to claims 3-5, 40, and 57-59, Liron discloses a chip further including at least one data control unit to regulate flow of the data to and from the at least one FIFO unit (Fig. 2, items 212 and 213); a chip where the processing units are central processing units (CPUs) (Fig. 2, items 200 and 204); and a chip further including at least two asynchronous clocks to control the at least two processing units (Fig. 2, items 100a and 100c).

With regard to claims 26, 27, 41, 61, and 62, Liron discloses a chip where the memories are random access memories (RAM) (Fig. 2, items 203 and 207); and the chip further including a common register accessible by the processing units to act as a

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channel of communication by which the processing units are to coordinate exchange of data between them (Fig. 2, item 219).

Therefore, Liron reads on the invention as specified in claims 2-5, 26, 27, 36-38, 40, 41, 56-59, 61, and 62.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liron in view of U.S. Patent Application Publication No. 2003/0009629 to Gruner, et al. ("Gruner").

As discussed above with regard to the 35 U.S.C. 102(b) rejection, Liron discloses all the features of claims 2 and 56.

Liron does not expressly disclose an apparatus where one of the processing units is to process media access control (MAC) commands and another of said processing units is to process physical layer device (PHY) commands of a networking protocol.

Gruner discloses an apparatus where one of the processing units is to process media access control (MAC) commands and another of said processing units is to process physical layer device (PHY) commands of a networking protocol.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Gruner with Liron. The suggestion or motivation for doing so would have been to provide parallel processing and networking capabilities (see paragraph [0030]).

Therefore, it would have been obvious to combine Gruner with Liron to obtain the invention as specified in claims 6 and 60.

Response to Arguments

8. Applicant's arguments, see pages 7-15, filed July 22, 2004, with respect to the rejections of claims 2-4, 26-27, 36-38, 40, and 41 under 35 USC 102(e) and 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, new grounds of rejection are made in view of Liron.

The Examiner is persuaded that neither Shih nor Elabd expressly disclose all the features of the claims (as amended). For example, Elabd does not teach at least two processing units with separate memories and separate busses. By way of further example, Shih in view of Elabd does not teach the FIFO and DMA within the chip, as claimed. However, Liron teaches the invention these features.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

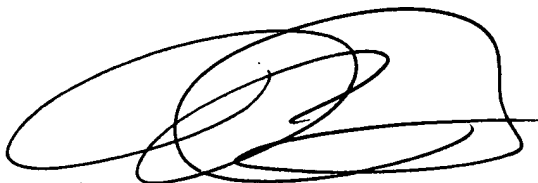
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donna K. Mason whose telephone number is (571) 272-3629. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on (571) 272-3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DKM

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke at the bottom.

**MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**